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SPC in the 21st Century –Effective or “Passé”?

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Statistical Process Control, presented by Walter Shewhart a hundred years ago, was always a tough topic to be completely and correctly adopted, applied and used by organizations.

In research studies we conducted in the last three decades, we found that very few organizations that tried to apply SPC either failed or dropped it within two years. But in the recent decade, SPC has undergone a serious revolution worldwide. From few and specific production line stations applying SPC, the applications became general, multi-parameter controls using advanced software dealing with a very large and diverse measurements performed over a large scope of positions and complex analyses using machine learning methods (directed or undirected).

In recent years certain awakening was experienced by industry when organizations realized that even in the Industry 4.0 era there is a lot of room for applying statistical control methods and tools on many processes.

We conducted a field study to investigate the level of success of SPC applications in today's industry, and the effects of SPC on business success (effectiveness) and on lowering their production costs (efficiency). Production efficiency is increased when there are less nonconforming items coming out of a production line, thus less fixing activities and less refuse and waste there.

We shall also present the success factors found mostly effecting successful SPC applications. We concluded that even today, we do not only need smart robots to do our work correctly.

Keywords

SPC, Implementation, Success

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